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Citation:

Soltani, S, Elkhani, N, Ahmad, M and Taghia, J 2013, 'The effects of perceived organizational support and personality traits on user involvement', in Hepu Deng and Craig Standing (ed.) ACIS 2013: Information systems: Transforming the Future: Proceedings of the 24th Australasian Conference on Information Systems, Melbourne, Australia, 4-6 December, 2013, pp. 1-11.

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Information Systems: Transforming the Future

**24th Australasian Conference on Information
Systems, 4-6 December 2013, Melbourne**

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The Effects of Perceived Organizational Support and Personality Traits on User Involvement

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Abstract

User involvement in information system development has long received research attention due to its significant effects on information system success. Prior studies have tended to focus on the consequences of user involvement, and in contrast, this research focuses on the factors that influence user involvement. The factors deserving more attention are perceived organizational support (POS) and personality traits that play significant roles in users' IS-related perceptions and behaviours. This in-progress research aims to explore the relationship among POS, personality traits, and user involvement. To achieve the research objectives, we developed a theoretical model that explains how perceived organizational support and the five personality traits namely: Neuroticism, Extraversion, Agreeableness, Openness, Conscientiousness influence user involvement. Further, this model explains how personality traits mediate the relationship between POS and user involvement.

Keywords

perceived organizational support, personality traits, user involvement, information system development.

INTRODUCTION

Information system (IS) usage has become pervasive in organizations, as it enables them to manage their business operations, increase productivity and service quality, enhance their competitive advantage and decrease costs (Lu et al. 2011). The explosive spread of ISs and the growth of IS technology has led organizations to engage in the Information System Development (ISD) process. One major subject in ISD that has long received IS researchers' attention (due to its significant effects on IS success) is user involvement (Chen et al. 2011). Researchers (Hartwick and Barki 1994; Jackson et al. 1997) have argued that user involvement includes two components, namely, situational involvement and intrinsic involvement. These refer to sets of behaviours or activities during the ISD process and subjective perception of IS, respectively.

Research (Eom 2005; Hartwick and Barki 1994; Rondeau et al. 2006) indicates that user involvement is a key factor in achieving IS success and many IS failures may be attributed to inadequate or lack of user involvement in ISD. The chains of influences between user involvement and the different forms of IS success have been well demonstrated. For example, user involvement components have been shown to significantly influence the following: perceived system usefulness (Amoako-Gyampah 2007; Jackson et al. 1997), perceived system quality and individual impact (De Waal and Batenburg 2009; McGill and Klobas 2004), as well as user satisfaction (De Waal and Batenburg 2009; Lin and Shao 2000; McGill and Klobas 2004). They have also been shown both indirectly (De Waal and Batenburg 2009) and directly (Amoako-Gyampah 2007) to influence behavioural intention to use IS, leading to more system use (Hartwick and Barki 1994). Given the importance of user involvement in relation to IS success, research consideration should be devoted to the development and testing of models that aid in predicting or enhancing user involvement. To the best of our knowledge, IS researchers mostly have studied the consequences of user involvement components, still, little is known regarding the factors that influence user involvement. Hence, this paper addresses this gap of research and attempts to understand the factors that influence users to engage in situational involvement, and form users' intrinsic involvements.

Because IS project teams only benefit from the selection of appropriate user participants (Kirsch and Beath 1996), research attention should be devoted to identifying which users display a keener attitude towards ISD and,

additionally, which types of individuals could serve as active members during development and as advocates of new systems in organizations. Thus, there should be an increase in attention paid to each user and their differences. Personality is the more relevant individual distinction due to its enduring quality that persistently determines human conduct in many types of situations (Eysenck and Eysenck 1985). Hence, this study considers personality traits (Five Factor Model (FFM)) as the factors deserving more attention in this area of research. FFM, as the most widely-accepted model of personality traits in current literature, has been associated with a number of organizational processes, behaviours, and outcomes (e.g., Barrick et al. 2001; Barrick and Mount 1991; Digman 1990). Moreover, evidence (Devaraj et al. 2008; Saleem et al. 2011; Terzis et al. 2012) shows that personality traits play a key role in users' IS-related beliefs and behaviours. Thus, it is reasonable to assume that personality characteristics of users have a significant influence on their involvement. Hartwick and Barki (1994) also recommended investigating the relationships between personality characteristics and user involvement. However, the role of personality traits in literature relating to user involvement has been left relatively unexplored. As a step forward towards understanding the role of personality in user involvement, research is needed to delineate the relationship existing between personality traits -by adopting FFM- and user involvement components.

In this study, perceived organizational support (POS) is also considered as an important factor that encourages users to engage in situational involvement, and enhance their intrinsic involvements. POS is the degree to which employees believe that their organization values their contributions and cares about their well-being (Eisenberger et al. 1986). When users feel their contribution is valued and they are supported by their organization, they tend to have a sense of obligation to the organization (Eisenberger et al. 1986). With a sense of obligation, they are more likely to exhibit ISD behaviours and form a positive perception towards new system. It has been shown that POS positively influences employees' personality characteristics and is capable of engendering more favorable employee attitudes and behaviours (Cheng 2011; Chiang and Hsieh 2012; Eisenberger et al. 2001; Riggie et al. 2009). In addition, research (Cho et al. 2011) has discovered positive links between POS and some indicators of IS success (IS satisfaction and perceived system usefulness). However, what is ignored by scholars is research that explores the relationship between users' POS and their situational and intrinsic involvement.

Thus, this research presents the integration of POS and personality traits- through the FFM- into user involvement research and aims to explore the relationship among POS, personality traits, and user involvement. More specifically, the purposes of this study are to:

- examine the relationship of personality –through FFM- to situational/ intrinsic involvement.
- investigate the relationship of users' POS to their situational and intrinsic involvements.
- validate mediators of personality traits between POS and situational/ intrinsic involvement.

The remainder of this in-progress paper is structured as follows. The following section briefly provides a theoretical background concerning user involvement (situational involvement and intrinsic involvement), FFM, POS and the research model. The subsequent sections discuss the current research direction, contributions and conclusion.

THEORETICAL BACKGROUND AND RESEARCH MODEL

User Involvement: Situational Involvement and Intrinsic Involvement

Prior research argued that user involvement includes two components, namely, situational involvement and intrinsic involvement (Jackson et al. 1997). According to Jackson et al. (1997), situational involvement refers to participation and activities (e.g., training) related to ISD, while intrinsic involvement refers to the association between objects, actions, or events and self-relevant goals and values. Hartwick and Barki (1994) refer to situational involvement as being participative behaviours or activities, and intrinsic involvement as being a user's subjective perception of IS, thereby defining the extent to which the user perceives a new system as being important and personally relevant. This conceptualization for user involvement components has been widely accepted, and is adopted by this study.

IS researchers mostly focused on the consequences of user involvement components. For example, Chen et al. (2011) examined the effect of situational involvement on IS project performance and showed that it had a positive effect on project performance. Jackson et al. (1997) introduced user involvement components to the Technology Acceptance Model (TAM) and found that intrinsic involvement was significantly related to users' perceptions (i.e. perceived usefulness). Following their work, Amoako-Gyampah (2007) found that in addition to perceived usefulness, intrinsic involvement had a direct effect on users' intentions to use the system. Hartwick and Barki (1994) studied the role of situational involvement and intrinsic involvement in IS use. Further, they discovered that the influence of situational involvement on intentions concerning use and IS use was mediated by intrinsic involvement, attitudes toward the system and concerning use, and subjective norms concerning use. Lin

and Shao (2000) examined the relationship between situational involvement and system success from the perspective of user satisfaction. They found that a positive relationship exists between situational involvement and system success. McGill and Klobas (2004) examined the relationship between user involvement components and several indicators of system success. Their research showed that situational involvement positively influenced intrinsic involvement. This subsequently directly impacted upon perceived system quality in a positive manner and indirectly influenced user satisfaction, individual impact, as well as perceived individual impact. In addition, De Waal and Batenburg (2009) showed that situational and intrinsic involvement was strongly related to perceived system quality, which significantly correlates with the intention to use and user satisfaction.

What has received less research attention in the user involvement context is research concerning the factors that influence user involvement components. We considered POS and personality traits as being important factors and hence focused on investigating relationships among POS, personality traits, and user involvement components. We believe such investigation is important because it enriches our knowledge regarding the psychological mechanism of users that leads to their involvement. More specifically, it first provides understanding on which personality characteristics tend to be involved in ISD projects and can actively contribute to the progress of ISD. We contend that such understanding is essential because, normally, it is not possible for all users to be involved in ISD thus, involvement should be restricted to potential users who could contribute actively to the progress of ISD. Moreover, management needs to ascertain who is suitable for situational involvement, since IS project teams only benefit from the selection of appropriate user participants (Kirsch and Beath 1996). Second, it helps to realize how users will exhibit positive behaviours and will be actively involved in ISD with regard to the level of POS. Such realization would be valuable for management since active involvement of users enhances the ISD process, which, in turn, influences ISD outcomes (Hartwick and Barki 1994). Third, it helps to gain knowledge of how intrinsic involvement (which is important in explaining IS acceptance and use) is formed and how it operates.

Our research model and its hypotheses that reflect current thinking are demonstrated in Figure 1. We begin with user involvement constructs (Box B in Figure 1), namely, situational and intrinsic involvement that are derived from previous studies (Hartwick and Barki 1994; Jackson et al. 1997). First, situational involvement (which is defined as a behavioural construct) (Barki and Hartwick 1994), refers to behaviours and activities that users perform during the ISD process. Situational involvement is comprised of three dimensions, namely: overall responsibility, user-IS relationship, and hands-on activity. Overall responsibility reflects leadership or accountability for the system development project (e.g., being the leader of the project team). The user-IS relationship reflects user-IS communication and influence (e.g., being kept informed by IS staff during various stages of ISD). Hands-on activity refers to specific physical design and implementation tasks being performed by users (e.g., designing a user training program) (Hartwick and Barki 1994). Second, intrinsic involvement (which is defined as a psychological construct) refers to a user's perception reflecting the extent to which a user perceives a system is important and personally relevant.

Research (e.g., Cheng 2011; Devaraj et al. 2008; Mitchell et al. 2012) has found potential links between employees' POS, personality characteristics, and IS-related perceptions or behaviours. Since the basic concept underlying user involvement places significant focuses on individuals' reactions and perceptions, we believe that users' POS and personalities have an influence upon their involvement. In addition, it is expected that personality characteristics will serve as mediating variables in relationships between POS and user involvement components. Thus, we link to user involvement constructs, namely, a core model of personality known as the Five Factor Model (Box A in Figure 1) that represents personality traits in five constructs and perceived organizational support construct. The next sections provide details on the constructs in the model and the proposed relationships between them.

Five Factor Model (FFM)

Personality can be defined as "an individual's unique and relatively consistent patterns of thinking, feeling, and behaving" (Hockenbury and Hockenbury 2007). Personality traits are considered stable because they are inborn and develop throughout one's lifespan, reaching maturity in adulthood (Buckner et al. 2012; Norman 1963). The most widely-accepted model of personality in current literature is the Five Factor Model (FFM), also known as the Big Five, in which the domain of personality is described by 5 dimensions mostly called, namely: neuroticism, extraversion, agreeableness, openness, and conscientiousness (Digman 1990). These factors theoretically capture the essence of one's personality (Digman 1990). Each dimension of FFM represents a unique set of personality traits. Neuroticism or emotional instability is represented by: anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability (Chamorro-Premuzic 2007). Extraversion signifies sociability, gregariousness, assertiveness, activity, excitement-seeking, and positive emotion (Chamorro-Premuzic 2007). Agreeableness denotes a tendency towards a trusting, good nature; in addition to being forgiving, soft-hearted, cooperative, flexible, and tolerant (Barrick and Mount 1991). Openness represents an individual's curiosity, a tendency to explore new ideas and willingness to try different experiences (Devaraj et al.

2008; McElroy et al. 2007). Conscientiousness symbolizes dependability (i.e. being responsible and careful), orderliness (i.e. being planful and organized), and achievement orientation (i.e. being hardworking and persistent) (Saleem et al. 2011).

Recently, researchers have begun to link personality traits with IS (or IT) related behaviours and perceptions. For example, FFM has been found to be related to technology use behaviours, including the use of the Internet (Landers and Lounsbury 2006; McElroy et al. 2007) and collaborating systems (Devaraj et al. 2008). Several studies have found that personality dimensions can be useful determinants of IS- related perceptions, including perceived usefulness, importance, and enjoyment (Devaraj et al. 2008; Terzis et al. 2012; Wang 2010; Yu-Ching Lin and Ong 2010). Following previous studies, the present study has also selected FFM because it is a unified, parsimonious, and comprehensive model, as well as being the most useful taxonomy for the study of personalities (Barrick et al. 2001; Costa and McCrae 1992; Digman 1990). Since the big five personality dimensions relate to IS (or IT)-related behaviours and perceptions, this has allowed us to examine how the big five relate to ISD behaviours (situational involvement) and other IS- related perceptions (intrinsic involvement). In following sections, we discuss the relationship between user involvement components and each of the five personality traits.

Neuroticism

Neuroticism is a negative trait (Cheng 2011) and determines anxious, self-conscious and depressed individuals who produce negative emotions and reactions to both life and work situations (Devaraj et al. 2008; Terzis et al. 2012). It has been suggested that this trait is negatively related to job performance (Devaraj et al. 2008). Because of the negative nature of this personality trait, neurotic users are likely to view ISD as a threatening and stressful process that could negatively impact on their tendency to engage in sets of ISD behaviours or activities such as responsibilities, user-IS relationship, and hands-on activities during system development. Therefore, it is expected that neurotic users are more likely to refuse engagement in ISD behaviours or activities.

Neurotic users are more likely to form negative perceptions about a new system, due to their general negativity. Since they are likely to view technological advances as stressful and threatening in their work (Devaraj et al. 2008), they may find a new system unimportant and insignificant in relation to their work. Hence, neuroticism could be negatively related to the perceived importance and personal relevance of a new system. Evidence for such a relationship is provided by Devaraj et al. (2008) who found that neurotic personalities are associated negatively with similar beliefs (i.e., the perceived usefulness of a commercial collaborating system). Thus, we hypothesize as follows:

H1a: Neuroticism is negatively associated with situational involvement.

H1b: Neuroticism is negatively associated with intrinsic involvement.

Extraversion

Extraversion represents a tendency towards a desire for social recognition, exhibition, status, and power (Costa and McCrae 1988). Extroverts are active individuals who search for excitement and new opportunities (McElroy et al. 2007). They have a desire to use their working environment in order to express their talents and meet their aspirations (Cooper 2003), as well as taking a leadership role (Watson and Clark 1997). Hence, extroverted users are more willing to be involved in ISD projects and participate in ISD activities, including responsibilities and hands-on activities (these represent new opportunities for them to do what is needed in order to express their talents and power). In addition, extroverted individuals are sociable, and place high value on close interpersonal relationships (Watson and Clark 1997). Moreover, extroverts show positive emotions, higher intensity and frequency of personal interactions (Chen 2011). Furthermore, Barrick and Mount (1991) found extroverted personalities to be particularly high performers in jobs with a social component, such as management. Hence, extrovert users are more likely to engage in behaviours with social components, including communication with IS staff and to be more willing to invest effort in such behaviours. Therefore, extraversion can be positively related to ISD behaviours or activities.

Extraversion is associated with positive perceptions (Judge and Ilies 2002). It has been shown that this personality trait has a positive effect on perceived importance (Terzis et al. 2012). Hence, it could be expected that extrovert users are more likely to form positive perceptions toward the new system, and to find it important and significant to improve upon their functional tasks. Thus, we hypothesize as follows:

H2a: Extraversion is positively associated with situational involvement.

H2b: Extraversion is positively associated with intrinsic involvement.

Agreeableness

Agreeableness represents the tendency to be sympathetic, cooperative, helpful and trusting (Barrick and Mount 1991). Agreeableness seems to have significant predictive validity for tasks involving interpersonal interaction

and teamwork, particularly when the interaction involves helping and cooperating with others (Barrick et al. 2001). Hence, agreeable users are more willing to become involved in ISD projects and to have responsibilities which enable them through cooperative, collaborative behaviours, to work effectively with other parties as a team during system development. Moreover, they are more likely to appreciate a cooperative and collaborative relationship with IS staff, which indicates that IS staff and users could work together to achieve a system that supports an organization's requirements. Since agreeable individuals are eager to help others, they are more likely to help end users in applying the new system in their daily work by engaging in and putting much more effort into performing hands-on activities (e.g., designing the user training program). Therefore, it is evident that agreeableness is strongly related to situational involvement involving assisting, collaborating, and cooperating behaviours in order to achieve a successful information system development.

A major trait of agreeableness is trust (Judge and Ilies 2002); it is therefore possible that agreeable users are likely to trust the new system, sense that their jobs are not threatened by it and, rather, be significantly enhanced in terms of productivity. In addition, agreeableness is strongly related to technology beliefs (perceived usefulness) when that technology fosters collaboration, cooperation, and task accomplishment (Devaraj et al. 2008). Hence, agreeable users are more likely to find the new system important and useful in accomplishing their daily work when considering that the new system can foster collaboration, cooperation, and task accomplishment. Therefore, we expect agreeableness to be positively related to a user's perception of importance and personal relevance of the new system. Thus, we hypothesize as follows:

H3a: Agreeableness is positively associated with situational involvement.

H3b: Agreeableness is positively associated with intrinsic involvement.

Openness

Openness reflects an individual's curiosity, creativity, willingness to search for new experiences and value change (Davis and Yi 2012; Devaraj et al. 2008). Because rapid change and diversity are now the norm in business organizations, this personality trait will be increasingly important in explaining work-related behaviour (Hough and Furnham 2002). Moreover, open individuals are less threatened by change (Devaraj et al. 2008). Hence, open users are more willing to be a part of organizational change by means of participation in ISD projects. Because open users tend to be curious and keen to explore new activities, they are more willing to participate in sets of ISD activities or behaviours such as responsibility, user-IS relationships and hands-on activities. Moreover, openness is task oriented, and open individuals tend to look for new ways of accomplishing work (Stewart and Nandkeolyar 2006), thus strengthening their working energy (Lounsbury et al. 2003). Hence, open users are more likely to invest more effort in performing ISD activities in order to achieve successful IS development that will affect their future work. Therefore, it is expected that a positive relationship will exist between traits of openness and users' ISD behaviours.

Open individuals tend to be willing to try new things and search for new experiences (Devaraj et al. 2008). Since open individuals tend to embrace new approaches to work, they are less threatened by the changes that will occur from adopting a new system. From these points, we expect that the personality trait of openness positively influences a user's perception about the new system. Likewise, Terzis et al. (2012) found openness to be a strong determinant of perceived importance. Therefore, we expect open users to be more likely to hold positive perceptions of the new system in terms of its importance and personal relevance. Thus, we hypothesize as follow:

H4a: Openness is positively associated with situational involvement.

H4b: Openness is positively associated with intrinsic involvement.

Conscientiousness

This personality trait is used to describe individuals who are hardworking, persistent, responsible, careful, and organized (Saleem et al. 2011). Conscientious individuals are intrinsically motivated to take actions to improve their job performance (Devaraj et al. 2008). The outcome of successful ISD is an IS that provides an opportunity for employees to further job achievement or performance. Hence, conscientious users are likely to engage in ISD behaviours or activities such as responsibility, communication and influence (user-IS relationship), and hands-on activities that could impact on IS success, which would subsequently have an effect on their job performance. Conscientiousness is associated with task performance (Rothmann and Coetzer 2003) and conscientious individuals are perceived as being able to work harder, and get more tasks accomplished (Heller et al. 2002). Hence, they are more likely to invest greater effort in performing ISD activities or tasks. Therefore, we anticipate a positive relationship between conscientiousness and users' ISD behaviours.

Since conscientious users are achievement-oriented and enjoy taking action to improve their job performance, they are more likely to find the new system important and useful by which to improve their job performance. Or, in other words, given their strong motivation to improve job performance, they are more likely to form positive

perceptions about the new system in terms of its importance and personal relevance. Thus, we hypothesize as follow:

H5a: Conscientiousness is positively associated with situational involvement.

H5b: Conscientiousness is positively associated with intrinsic involvement.

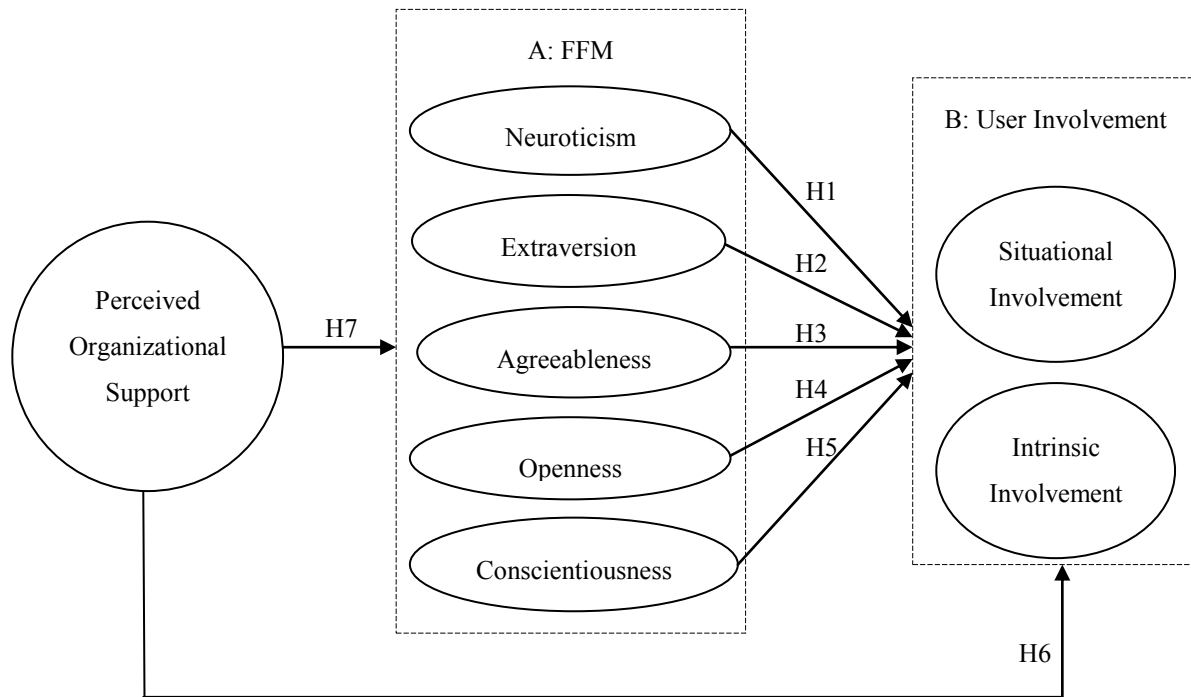


Figure 1: Research model

Perceived Organizational Support

Perceived organizational support (POS), which has roots in organizational support theory, refers to employees' "beliefs concerning the extent to which the organization values their contribution and cares about their well-being" (Eisenberger et al. 1986). Such POS increases employees' felt obligation to care about the organization's welfare and to help the organization reach its objectives (Eisenberger et al. 2001). POS is influenced by variety factors such as organizational rewards in the form of praise, money, or promotions (Eisenberger et al. 1986). Drawing from perceived organizational support literature, it has been shown that POS is positively related with employee outcomes, including: positive mood, organizational commitment, job satisfaction, job involvement, and organizational citizenship behaviours (Cheng 2011; Chiang and Hsieh 2012; Rhoades and Eisenberger 2002; Riggle et al. 2009). In IT research, Mitchell et al. (2012) showed that POS is also associated with the motivation to use a new IT, and to behavioural and attitudinal reactions to new IT. In the IS context, Cho et al. (2011) found that users' POS enhances their IS satisfaction and perceived system usefulness. In sum, current literature denotes that those perceptions by employees' of being valued and cared about by the organization (POS) are significantly related to their working behaviours and IS-related perceptions and behaviours. Thus, we expect that potential links exist between POS and situational/ intrinsic involvement.

Social exchange theory (SET) provides theoretical support for the relationship between POS and user involvement components. SET explains that individuals feel obligated to reciprocate when they benefit from the actions of a particular entity (Cropanzano and Mitchell 2005). Based on SET, we contend that those users who perceive a high degree of POS may engage with and put more effort into performing ISD activities because they feel indebted to the organization which values their contribution. Since users feel that their organization supports them, this perception also would enhance users' frame of mind toward a new system, which can result in forming positive perceptions toward a new system. Hence, perceived system importance and relevance as well as putting more effort into carrying out ISD activities can be as reciprocations that users provide to return their organization's attention. In this paper, we take POS as an important factor with regard to situational and intrinsic involvement. Thus, we hypothesize as follows:

H6: POS is positively associated with: (a) situational involvement and (b) intrinsic involvement.

Cheng (2011) investigated POS and job involvement and revealed that employees' POS positively influenced their personality traits; moreover, personality traits enhanced their job involvement. Thus, employees' POS increase their positive outputs, such as: sociability, activity, excitement-seeking, positive emotion, cooperative, flexibility, dependability, hardworking, etc.; these attributes refer to sets of traits composing the main personality characteristics. Therefore, we expect that personality characteristics form a high degree of perceived system importance and relevance, and also put more effort in performing ISD-related behaviours taking into account the level of POS. Thus, we hypothesize as follows:

H7: POS is positively associated with personality traits, including: (a) extraversion, (b) agreeableness, (c) openness, (d) and conscientiousness.

POS is also expected to have no impact on how neurotic users perceive the system in terms of its importance and personal relevance as well as participation in ISD due to their general negativity (Devaraj et al. 2008). Thus, we hypothesize as follows:

H7e: POS has no impact on neuroticism.

CURRENT RESEARCH DIRECTION

This research-in-progress is carried out in a study of two branches of an oil company that have recently developed new ISs. We apply a quantitative approach and survey to collect data from the samples. The questionnaires used for data collection involve five sections, specifically: POS, personality traits, situational involvement, intrinsic involvement, and basic respondent demographic data. The partial least squares (PLS) technique which is a structural equation modelling technique is applied to data processing. The PLS is widely used for empirically-based studies due to its minimal restrictions on the sample size; it models and validates predictive models (Chin 1998). Data analysis is conducted in two phases as follows. First, validity of the measurements is tested using confirmatory factor analysis. Second, an analysis of the structural equation model is conducted in order to test our hypotheses.

RESEARCH CONTRIBUTION AND CONCLUSION

This study employed POS, personality traits, and user involvement components (situational and intrinsic involvement) as major elements of the research model. To the best of our knowledge, this is the first study of POS and personality traits in conjunction with user involvement components. We have made a contribution to user involvement literature by presenting a theoretical model aiming to explain the influence of POS and personality characteristic on user involvement through offering a theory-driven explanation and referencing prior literature. More specifically, the present study offers three major contributions to the field. First, it explores the relationship between personality traits and situational involvement so as to provide a better understanding of which personality characteristics are more likely to engage in ISD activities and contribute actively to the progress of ISD. Second, our study showed that POS, as an operation for the social exchange perspective, is an important way for users who are supported by their firm to form a high degree of intrinsic involvement and actively perform ISD activities, thus leading to increased likelihood of ISD success. Thus, the current study highlights the importance of users' POS and personalities in their performance during ISD and suggests management incorporate individual differences to the criteria employed when users are selected for situational involvement. Since a high degree of POS can lead to increased positive outputs of users, we suggest that management provides a supportive work environment such as: providing day-to-day treatment of users, creating fair reward systems, establishing a harmonious relationship for creating high levels of POS of users who should be encouraged to be actively involved in ISD. Third, the study has explored the relationship between POS/personality traits and intrinsic involvement so as to gain knowledge of how intrinsic involvement is formed and how it operates. By understanding how POS/personality traits relate to intrinsic involvement, IS researchers and managers can have a better idea about how to increase users' intrinsic involvements and capture its transient nature by examining its relationship with personality traits/ POS.

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